

## **Town of Andover**

### **Creating Habitable Space in Basement**

(Applies to existing unfinished basements being converted to habitable space)

**This information does NOT address new construction requirements**

The following information is needed to determine whether you can finish off a habitable space (recreation room etc) in your basement in accordance with the current Massachusetts State Building Code 780 CMR

1. Stairs shall not be less than 36" (914mm) in clear width at all points above the permitted handrail height and below the required headroom height **5311.5.1**
2. Handrails shall not project more than 4.5" (114 mm) on either side of the stairway **5311.5.1**
3. The minimum clear width of a stairway at and below the handrail height, including treads and landings shall not be less than 31.5" (787 mm) where a handrail is installed on one side and 27" (698 mm) where handrails are provided on both sides **5311.5.1**
4. The minimum headroom in all parts of the stairway shall not be less than 6'6" (1981 mm) measured vertically from the sloped plane adjoining the tread nosing or from the floor surface of the landing or platform **5311.5.2**
5. Riser height – the maximum riser height shall be 8 ¼" (210 mm) The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8" (9.5mm) **5311.5.3.1**
6. Tread depth – minimum tread depth of existing stairs serving unfinished basements shall be 9" (229 mm) the tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than 3/8" (9.5 mm) **5311.5.3.2**
7. Handrails shall be provided on at least one side of each continuous run of treads or flight with **three** or more risers **5311.5.6**
8. Ceiling height – minimum ceiling height in existing basements being converted to habitable space shall not be less than 6'8" (2032mm) clear except under beams, girders, pipes, ducts or other obstructions spaced not more than 4' on center where clear height shall be a minimum of 6'6" (1981 mm) **9305.1**
9. If planning to use for sleeping purposes an emergency egress window is required. The window shall have a net clear opening of 5 square feet (0.465 m2) and a maximum of 44" (1118 mm) from finished floor to sill height. Other considerations apply but are beyond the scope of this handout. Please refer to 780 CMR for additional requirements.
10. A scaled drawing showing the **ENTIRE** basement with the locations of all utilities such as a boiler, furnace, hot water heater, electrical panel, washer, and dryer. If there is a wood burning stove, fireplace, or gas fireplace either proposed or existing show these on the plan as well. Label all areas in the basement clearly on the plan to show their intended/proposed use.
11. Make up and combustion air must be addressed. Please note on your drawing the number of INPUT BTU's on ALL fuel burning appliances (ie: gas or oil) If there is a gas dryer located in the basement please include this as well.
12. Fireblocking is required in all areas as listed **5602.8**

Please bring the scaled plan showing the ENTIRE basement with room layout and all of the rooms and uses clearly labeled in addition the information listed below

- 1 Stair width above handrail \_\_\_\_\_
- 2 Stair width below handrail \_\_\_\_\_
- 3 Headroom on Stairway \_\_\_\_\_
- 4 Riser Height \_\_\_\_\_
- 5 Tread Depth \_\_\_\_\_
- 6 Finished Ceiling Height \_\_\_\_\_
- 7 Height under lowest beam, pipe, duct etc. \_\_\_\_\_
- 8 Sleeping Rooms proposed? (circle one) YES or NO
- 9 Total square footage of ENTIRE Basement \_\_\_\_\_
- 10 INPUT BTU'S on furnace or boiler (if gas or oil) \_\_\_\_\_
- 11 INPUT BTU'S on hot water heater (if gas or oil) \_\_\_\_\_
- 12 INPUT BTU'S on clothes dryer (if gas) \_\_\_\_\_
- 13 Wood fireplace or stove in basement (circle one) YES or NO
- 14 Gas fireplaces or gas fired heaters in basement (circle one) YES or NO

Inspectors are available daily from 8:00am to 10:00am to answer any additional questions which you may have.

**The Town of Andover Building Department is offering this informational handout as an example of common issues and questions that may arise on a typical job. The town assumes no responsibility for any errors or omissions, and the person filing for the permit is required to follow all applicable codes. No handout could possibly cover all situations, nor is this one intended too.**

**CAC basement handout  
11/6/08**